DETAILED ACTION

Allowable Subject Matter

Claims 1-17 and 21 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 1, the prior art of record does not teach nor suggest, in the claimed combination, an actuator locatable in a fluid flow path comprising: a single substrate upon which is fabricated a membrane, a membrane activating mechanism, and an integrated circuit; wherein the membrane can stabilize in a first position, a second position, and an intermediate position, in the first position, the membrane inhibiting fluid flow through the fluid flow path, and in the second position, the membrane enabling fluid flow through the fluid flow path, in the intermediate position, the membrane enabling partial fluid flow through the fluid flow path.

Claim 12, the prior art of record does not teach nor suggest, in the claimed combination, an actuator for an integrated circuit comprising: a single substrate upon which is fabricated a membrane, a membrane activating mechanism, and an integrated circuit; wherein the membrane can stabilize in a first position, a second position, and an intermediate position, in the first position, the membrane inhibiting fluid flow through the fluid flow path, and in the second position, the membrane enabling fluid flow through the fluid flow path, in the intermediate position, the membrane enabling partial fluid flow through the fluid flow path.

Claim 21, the prior art of record does not teach nor suggest, in the claimed combination, an electromagnetic actuator locatable in a fluid flow path comprising: a

single substrate upon which is fabricated a membrane, a membrane activating mechanism, and an integrated circuit; wherein the membrane can stabilize in a first position, a second position, and an intermediate position, in the first position, the membrane inhibiting fluid flow through the fluid flow path, and in the second position, the membrane enabling fluid flow through the fluid flow path, in the intermediate position, the membrane enabling partial fluid flow through the fluid flow path.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BERNARD ROJAS whose telephone number is (571)272-1998. The examiner can normally be reached on M and W-F, 5:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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